COMMUNITY ENVIRONMENTAL COMPANY, LLC
BROWNFIELDS CLEANUP PROJECT

GRANT CLOSEOUT REPORT

Cooperative Agreement Number: *(BF-95403211)*
Date Submitted: June 12, 2015

Prepared by:
Reginal B. Barner
Chief Executive Officer
CEC
560 Jefferson Davis Highway
Graniteville, South Carolina 29829
803-663-6848
rbarner@thebarnergroup.com

Submitted to:

Cindy Nolan
U.S. EPA Project Officer
61 Forsyth Street
Atlanta, GA 30303-8960
404/562-8425
Nolan.cindyj@epa.gov

Brownfields Data Manager
U.S. Environmental Protection Agency
Ariel Rios Building (MS-5105)
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460
bf_forms@epa.gov

1.0 PROJECT OVERVIEW

Aiken County was the site of the South's first large scale cotton manufacturing plant. William Gregg received a charter from the South Carolina Legislature for the Graniteville Manufacturing Company (now known as the former Avondale Mills site) in 1845 and built the state's first manufacturing plant in 1846 in Graniteville. The Graniteville Company relied on local people to build the mill as well as operate it, employing farmers, tenant farmers, and the poor at wages commensurate with those paid to Northern mill workers. Gregg provided quality housing for his workers, as well as a church, a small library, and school. Graniteville Mill survived the Civil War and continued operating under the Graniteville Company until it was sold in 1996 to Avondale Mills. Avondale Mills was one of the nation's largest denim manufactures until it closed in mid-2006.

On January 6, 2005, the Avondale Mills site was the scene of the nation's worst chemical accident from a train crash since 1978. A Norfolk Southern freight train carrying various chemicals, including several with poisonous chlorine gas, collided with another Norfolk Southern rail car parked just outside the Avondale Mill facility in Graniteville. The 2:40 a.m. accident happened when a manual track switch was left in the wrong position. After moving their train onto a sideline track, operators of the train failed to reset the manual switch so that another train would stay on the main line. Hours later, the train that was supposed to stay on the main line hit the parked train on the sideline and the chemicals were released. The spilled chlorine caused a gaseous cloud that hovered over the community for several days. In all, nine (9) people perished (eight at the time of the accident, one later due to chlorine inhalation), and at least 250 people were treated at local hospitals for chlorine exposure. More than 5,400 residents within a mile of the crash site were forced to evacuate for nearly two weeks while HAZMAT teams and cleanup crews decontaminated the area. Norfolk Southern estimated their long term cost of the disaster to be in the neighborhood of $40 million.

Following the train accident, Avondale Mills struggled due to a lack of production caused by the excessive damage to the buildings and machinery from the corrosive chlorine and production time lost. On July 25, 2006, Avondale Mills shut its doors, leaving more than 2,000 people in the local community without a job. The closing also created fifteen (15) large brownfield sites, encompassing more than 250 acres in the three (3) communities of Graniteville, Warrenville and Vaucluse.

Over the past 10 years, the combined efforts of the public, private, and non-profit sectors have been addressing the brownfield sites. In October 2011, the Community Environmental Company, LLC (CEC) received three (3) EPA Brownfield Cleanup Cooperative Agreements/Grants for the Former Avondale Mills facilities; Warren Plant, Gregg Plant, and the Granite Plant – Red Barn, located in Graniteville, Aiken County, South Carolina. CEC utilized the grant funds for the following programmatic activities: project management/reporting, community involvement, cleanup and redevelopment planning, and site cleanup activities.

2.0 PROJECT ACTIVITIES COMPLETED

In July 2012, CEC issued a Request for Qualifications for consulting firms to provide support for the brownfields project. After evaluating the responses, CEC selected CTC Public Benefit

Corporation (CTC PBC) to provide technical support. In July 2013, Cardno, Inc. acquired the staff and assets of CTC PBC. Over the grant's period of performance, CEC completed the following activities.

2.1 GREGG PLANT

CEC planned to use the grant funds to cleanup portions of the 31-acre Former Avondale Mills – Gregg Plant Property. The work plan identified the following four priority areas for cleanup, subject to the finalization of the Analysis of Brownfield Cleanup Alternatives (ABCA):

1. Remove, characterize for disposal, and dispose of the nine (9) chemical Aboveground Storage Tanks (ASTs) and all associated piping and lines.
2. Remove, characterize for disposal, and dispose of the stained/contaminated soils from the former tank farm area, including an estimated 1,700 cubic yards of soil.
3. Confirmation sampling will be conducted in areas where the tanks and soils were removed.
4. Abatement of floor tile and mastic Asbestos-Containing Materials (ACM), pipe insulation, joint compound, and window glazing from across the property.

Prior to grant award, the owner and partners removed and properly disposed of the nine (9) chemical ASTs and all associated piping and lines. Therefore, the draft ABCA and cleanup plan focused on the remaining three items. The draft ABCA was completed in January 2012 (finalized in July 2013 after no public comments were received), and CEC released a Request for Bids for Environmental Remediation Services at Gregg Plant with the following tasks:

- Task 1: Provide a Health & Safety Plan
- Task 2: Provide a cost for Mobilization and Demobilization
- Task 3A: Estimated 30,000 square feet of asbestos-containing floor tile
- Task 3B: Estimated quantity of 20,000 square feet of Gypsum Wall Board with asbestos joint compound
- Task 3C: Estimated quantity of 1,000 linear feet of asbestos containing Block Piping Insulation
- Task 3D: Estimated quantity of 550 linear feet of 3" asbestos containing piping insulation
- Task 6 & 6A: Excavation & removal and disposal of concrete and soil in the 0.75 acre tank farm area, consisting of concrete slabs, foundations, tank cradles, etc.; Complete stormwater/erosion control measures following removal, including grading, seeding, and silt fencing
- Task 7: Demolition, removal & disposal of two (2) structures in the tank farm area
- Task 8: Demolition, removal & disposal of six (6) asbestos-containing roof structures approximately 200 square feet each

The quantities in Tasks 3A-D were based on estimates, since asbestos testing had not been completed on all pipes, tiles, and wall boards; so each contractor provided a unit rate quote based on the estimated quantities provided. CEC received acceptable bid responses from four different companies:

- Target Contractors - $212,837
- B&B Demolition - $264,167
- NEO Corporation - $304,175
- HEPACO - $421,323

Target bid the scope of work very aggressively and had the lowest bid by approximately $50,000. CEC carefully compared the bids to make sure that Target's quote offered the same services and complied with all of the scope requirements. After determining that Target's bid was compliant, CEC moved forward with final contract negotiations.

Since the bid still exceeded the project budget, CEC prioritize and reduced the project scope. The removal of the buildings and structures in Tasks 7 & 8 were fixed price scopes and both were a high priority. The work in tasks 1 & 2 were mandatory parts of the scope, so those four tasks became the top priority. The removal of asbestos pipes, tiles, and wall board materials in Tasks 3A-D were quoted on a unit price basis for unknown quantities, as were the removal of the soil and concrete in the tank farm area under task 6. There was no way to estimate the amount of work in Task 6 prior to doing the work, but it was possible to determine the asbestos quantities in Tasks 3A-D prior to executing the contract. Therefore, CEC decided to calculate those quantities in order to more clearly understand how our project funds could best be applied toward the overall project scope.

Apex Environmental was engaged to complete an Asbestos Project design, which defined the work scope, tested the materials, and verified the amounts and quantities of asbestos pipes and tiles. Unfortunately, the actual quantities of pipe that tested positive for asbestos far exceeded the estimated quantities, coming in at 3,900 linear feet instead of the estimated 1,550 feet. This had the potential to increase the cost by $40,000 over the amount estimated. Fortunately, CEC was able to negotiate a considerable price reduction with Target on the asbestos pipe remediation cost. The asbestos pipes to be remediated had scrap value, but no value to the building. Therefore, Target agreed to reduce its remediation cost by 50% in exchange for the scrap value after asbestos abatement. This resulted in a cost savings of approximately $20,000 for the project.

Additionally, in exchange for our agreement to increase the project budget with an additional owner contribution $17,620, Target agreed to remove the concrete pads in the Tank Farm area for a fixed price of $44,436. Target agreed to take on this fixed price risk, regardless of the concrete quantities it actually encountered, in lieu of completing that scope on a unit-price basis, which was estimated to cost $57,550. In the end, the quantities removed from the tank farm area slightly exceeded the estimated quantities, so this also proved to be a significant cost savings to the project in the range of $15-20,000. Target completed all remediation activities by January 2014.

In February 2015, the EPA and the South Carolina Department of Health and Environmental Control (SC DHEC) approved the combined Generic and Site-specific Quality Assurance Project Plan (QAPP) developed by Cardno, Inc., for confirmation sampling in the former tank farm area. Cardno collected seven (7) soil samples on February 26, 2015, for laboratory analysis from three locations in the former tank farm area. The analysis of the samples found one surface soil location with a concentration of Aroclor 1254 above the EPA Industrial Screening Level and

benzo(a)pyrene above the EPA Residential Screening Level. Arsenic was present in one other soil sample location at a concentration above the Residential Screening Level but within normally-occurring ranges for this region; therefore, Cardno believed it is likely of no consequence. However, due to the elevated Aroclor 1254 and benzo(a)pyrene, Cardno recommended additional soil removal or the installation of an engineered cover to prevent exposure.

A combination of (i) Target's low bid offer, (ii) the cost savings we negotiated in our final contract with Target, and (iii) CEC's additional owner contributions to the project (in the form of money contributed and scrap metal offered) allowed CEC to complete a much greater extent of the work than we initially anticipated. CEC was not able to complete all of the work, but the following is a breakdown of the work completed versus the work still remaining:

1. Remove, characterize for disposal, and dispose of the nine (9) chemical ASTs and all associated piping and lines: Work completed without grant funding.
2. Remove, characterize for disposal, and dispose of the stained/contaminated soils from the former tank farm area, including an estimated 1,700 cubic yards of soil: Work partially completed – approximately 5,000 tons of material was removed and disposed of properly from the former tank farm area – however, additional soil removal or a cap may be necessary.
3. Confirmation sampling will be conducted in areas where the tanks and soils were removed: Work completed.
4. Abatement of floor tile and mastic ACM, pipe insulation, joint compound, and window glazing from across the property: Completed 50% of floor tile removal with 8,760 square feet of tile remaining at an approximate removal cost of $19,710. Completed 50% of the asbestos piping removal with 1,988 linear feet remaining at an approximate removal cost of $25,276.

2.2 WARREN PLANT

CEC planned to use the grant funds to cleanup portions of the 7.3-acre Former Avondale Mills – Warren Plant Property, with an emphasis on permanent removal and disposal of contaminated soils (source material) and asbestos-containing materials within the building. Based on the Analysis of Brownfields Cleanup Alternatives (ABCA) that was completed in September 2010, prior to the grant award; the work plan included the following cleanup activities:

1. Remove, characterize for disposal, and dispose of the estimated 700 cubic yards of stained/contaminated soils from the former coal storage area.
2. Remove and dispose of regulated asbestos-containing materials, specifically Thermal System Insulation (TSI) on piping of 8,000 linear feet.

Due to the decision to demolish portions of the building, CEC released an Invitation to Bid for Asbestos Abatement Services specifically for materials located in Area 2 and Stair 1, as identified in the Asbestos Survey. Included in the bid package was the Asbestos Abatement Design completed by Apex Environmental Management on July 15, 2014. NEO Corporation was awarded the work after responding with an acceptable bid of $20,500. NEO completed the designated asbestos abatement activities by February 2015.

CEC released a second Invitation to Bid for Asbestos Abatement Services for all the remaining asbestos-containing materials in the interior of the building and a portion of the roof in December 2014. Included in the bid package was a revised Asbestos Abatement Design completed by Apex Environmental Management on December 18, 2014. However, due to the expiring period of performance of the grant, CEC decided not to proceed with the work.

Utilizing the grant funds, CEC was able to conduct the necessary abatement of asbestos containing materials in areas of the Warren Plant slated for demolition. The selective demolition of these areas will return the Warren Plant to the historic structural footprint. CEC was not able to complete all of the remediation work required at the Warren Plant, but the following is a breakdown of the work completed versus the work still remaining:

1. Remove, characterize for disposal, and dispose of the estimated 700 cubic yards of stained/contaminated soils from the former coal storage area: Not completed.
2. Remove and dispose of regulated asbestos-containing materials, specifically Thermal System Insulation (TSI) on piping of 8,000 linear feet: Completed the abatement of 5,255 square feet of floor tile, mastic, and transite panels. Significant amounts of Asbestos-containing Materials remain.

2.3 RED BARN

CEC planned to use the grant funds to cleanup portions of the 2.81-acre Granite Plant - Red Barn Property, with an emphasis on permanent removal and disposal of dumped waste material and any contaminated soils (source material) associated with dumping and/or chemical use and storage on the property. The work plan identified the following activities, subject to the finalization of the Analysis of Brownfield Cleanup Alternatives (ABCA):

1. Remove, characterize for disposal, and dispose of approximately 4,000 cubic yards of debris, dump material, and any associated soils.
2. Confirmation sampling will be conducted in areas where debris and soils were removed.

CTC Public Benefit Corporation completed a draft ABCA on January 17, 2012, which recommend the removal, excavation of impacted site soils, placement of clean backfill, and the use of engineering controls to complete the cleanup. However, a wetlands delineation survey and a wetlands plat developed by Hass & Hilderbrand, Inc., in October 2012 revealed the entire dumpsite area is within the wetlands area. CEC met with the US Army Corps of Engineers in June 2013 to discuss remediation options and requirements for work within the wetlands area. CEC also held several discussions with stakeholders and The Boudreaux Group, an architectural firm, on potential redevelopment concepts for the site. Unfortunately, CEC determined the remediation and redevelopment of the Red Barn was ultimately not economically feasible with the grant funding. Therefore, no remediation activities were completed on the Red Barn property.

2.4 REDEVELOPMENT PLANNING

In August 2012, CEC engaged Clemson University faculty and students through the a.LINE.ments public outreach studio in the Department of Landscape Architecture. The team was tasked to work with CEC and the community to develop a vision for redevelopment of the Avondale/Graniteville Mill village and mill site. Special attention was particularly placed on integrating the Red Barn property, the Gregg Plant, and the Warren Plant. Aligning with the goals and objectives of Clemson University, the project offered students the opportunity to engage in a real-world project, while also affording the community an opportunity to actively participate in the redevelopment for the brownfield sites. In January 2015, the a.LINE.ments studio delivered the Graniteville Mill District plan with several concepts and recommendations for the sites, including a greenway, farmers market, museum, arts center, and commercial development. CEC has already taken steps to implement some of the recommendations and partners will use the plan as a blueprint for continuing the redevelopment efforts at the sites.

3.0 PROJECT FUNDS EXPENDED

Expenses for the grant period from October 1, 2011, to March 31, 2015, included contractual costs paid to CTC PBC/Cardno, for project oversight and technical support for all three sites; Target Contractors and Apex Environmental Management for remediation activities at Gregg Plant; NEO Corporation and Apex Environmental Management for remediation activities at the Warren Plant; and Clemson University for redevelopment planning for all three sites. Also included are personnel expenses for CEC staff salaries when performing programmatic duties associated with the grants, supplies expenses for public notices and advertisements, and travel expenses for staff to attend the US EPA Community Involvement Conference, where CEC served as presenters. EPA grant funds expended to date total $310,418.33. Total remaining balance of funds is $289,581.67. CEC has provided matching funds totaling $103,935.36 or 33.4% of EPA funds expended, exceeding the required 20% match. The following tables show the cumulative amounts expended and the amounts expended for the July 1, 2014, to March 31, 2015, period by budget category and by project site.

Table 1: Summary of Costs Incurred for Gregg Plant Project

Expense Categories	Current Approved Budget	Costs Incurred This Period	Costs Incurred To Date	Total Remaining Budget Funds
Personnel	$20,000	$11,078.39	$21,078.39	($1,078.39)
Fringe Benefits				
Travel	$3,000	$0	$1,844.66	$1,155.34
Equipment				
Supplies	$2,000	$0	$611.95	$1,388.05
Contractual	$215,000	$32,124.99	$220,035.86	($5,035.86)
Other				
EPA's Share	$200,000	$39,632.52	$200,000.00	$0
CEC's Share	$40,000	$3,570.86	$43,570.86	($3,570.86)
Total	$240,000	$43,203.38	$243,570.86	($3,570,86)

Table 2: Summary of Costs Incurred for Warren Plant Project

Expense Categories	Current Approved Budget	Costs Incurred This Period	Costs Incurred To Date	Total Remaining Budget Funds
Personnel	$20,000	$11,078.39	$21,078.39	($1,078.39)
Fringe Benefits				
Travel	$3,000	$0	$1,844.61	$1,155.39
Equipment				
Supplies	$2,000	$0	$611.95	$1,388.05
Contractual	$215,000	$53,532.56	$80,088.88	$134,911.12
Other				
EPA's Share	$200,000	$41,070.07	$72,916.57	$127,083.43
CEC's Share	$40,000	$23,540.88	$30,707.26	$9,292.74
Total	$240,000	$64,610.95	$103,623.83	$136,376.17

Table 3: Summary of Costs Incurred for Red Barn Project

Expense Categories	Current Approved Budget	Costs Incurred This Period	Costs Incurred To Date	Total Remaining Budget Funds
Personnel	$20,000	$0	$21,078.39	($1,078.39)
Fringe Benefits				
Travel	$3,000	$0	$1,844.66	$1,155.34
Equipment				
Supplies	$2,000	$0	$611.95	$1,388.05
Contractual	$215,000	$0	$43,624.00	$171,376.00
Other				
EPA's Share	$200,000	$0	$37,501.76	$162,498.24
CEC's Share	$40,000	$0	$29,657.24	$10,342.76
Total	$240,000	$0	$67,159.00	$172,841.00

3. PROJECT BENEFITS AND CHALLENGES

The work performed under the EPA grants is already paying dividends for the Graniteville community. In addition to the above-described work completed by CEC with funds supplied by the EPA grant, CEC has also made numerous improvements to the Gregg plant in hopes of making this facility more attractive to potential end users. After the mill equipment was removed, CEC engaged Target to clean up the interior appearance by removing unsightly scrap metal and piping, dilapidated buildings, roof structures, trash and other debris. CEC also engaged HEPACO to remove asbestos bags and hazardous waste containers from the property. These efforts and the removal of asbestos throughout most of the facility made the Gregg Plant more attractive to potential end users, and significant portions of the facility are now being used as warehouse space.

These cleanup efforts along with CEC's dedication of a canoe trail to Aiken County brought positive attention to the area and helped CEC draw the attention of RECLEIM LLC to its Hickman Mill facility. RECLEIM purchased the Hickman facility and invested over $37,000,000 in facility and equipment in order to accommodate a cutting edge recycling operation that employs 200 people in Graniteville. CEC's clean-up efforts under the EPA grant also encouraged a group of investors to make a purchase offer on the Gregg Plant, as well as several other properties and mill facilities in Graniteville. This purchase is scheduled to close soon and has the potential to bring hundreds of new jobs to this area. While all the planned remediation efforts were not completed, our partnership with EPA on this project and the improvements that were funded under the EPA grant are making a huge difference to our community. Without the EPA's support, these recent investments and improvements would not have been possible.

4. PROJECT DELIVERABLES AND DATA

The following documents are included on the project CD, sent under separate cover.

1. Final Performance Report

2. Gregg Plant:
   1. ABCA – CTC Public Benefit Corporation, January 17, 2012
   2. Invitation to Bid
   3. Contract for Target Contractors
   4. Asbestos Abatement Design - Apex Environmental Management, May 1, 2013
   5. Gregg Plant Confirmation Sampling QAPP, Cardno, Inc.
   6. Gregg Plant Confirmation Sampling Report, Cardno, Inc.
   7. Before Photos
   8. After Photos

3. Warren Plant:
   1. ABCA - Terracon Consultants, Inc.
   2. Invitation to Bid
   3. NEO Corporation Contract
   4. Asbestos Abatement Design - Apex Environmental Management, July 15, 2014
   5. Warren Plant Invitation to Bid #2
   6. Revised Asbestos Abatement Design, Apex Environmental Management, December 18, 2014

4. Red Barn:
   1. ABCA - CTC Public Benefit Corporation, January 17, 2012
   2. Wetland Plat - Hass & Hilderbrand, Inc., October 1, 2012

5. Redevelopment Planning:
   1. Clemson University a.LINE.ments Scope of Work
   2. Graniteville Mill District Plan

6. Quarterly Reports